

## Agricultural Chemical Usage

The 2005 chemical use summaries for fruit and field crops provide pesticide use data on 5 Michigan fruit crops, corn, oats, and potatoes. Fruit chemical use statistics are published every other year, alternating with vegetable chemical use statistics. Information is provided from a survey funded by the USDA Pesticide Data Program to provide reliable pesticide use statistics and to enhance the quality of information on pesticide residues in food. This data series addresses the increased public interest in agricultural chemical use and provides the means for government agencies to

respond effectively to food safety and water quality issues. The entire series of chemical usage statistics since 1990 for Michigan and the U.S. can be found on the NASS website at [www.nass.usda.gov](http://www.nass.usda.gov). A list of associated trade names is provided following the chemical application tables as an aid in reviewing the data. The list does not imply a recommendation for any specific trade name.

**Apples: Agricultural chemical applications, 2005<sup>1</sup>**

Agricultural chemical	Area applied <i>Percent</i>	Applications <i>Number</i>	Rate per application <i>Pounds per acre</i>	Rate per crop year <i>Pounds per acre</i>	Total applied <i>1,000 lbs</i>
<b>Herbicides</b>					
2,4-D, dimeth. salt	6	1.5	0.71	1.04	2.7
Diuron	9	1.1	1.40	1.49	5.5
Glyphosate iso. salt	25	1.2	0.73	0.90	9.0
Oryzalin	( <sup>2</sup> )	1.0	2.09	2.09	0.2
Paraquat	7	1.0	0.75	0.75	2.0
Simazine	5	1.1	1.36	1.48	3.1
Terbacil	3	1.0	0.49	0.50	0.6
<b>Insecticides</b>					
Abamectin	6	1.0	0.01	0.01	( <sup>3</sup> )
Acetamiprid	20	1.5	0.05	0.08	0.6
Azinphos-methyl	80	3.1	0.73	2.29	74.3
Benzoic acid	19	1.6	0.17	0.28	2.2
Bt subsp. kurstaki	7	1.4	( <sup>4</sup> )	( <sup>4</sup> )	( <sup>3</sup> )
Carbaryl	29	1.4	0.99	1.43	16.9
Chlorpyrifos	63	1.2	0.97	1.17	29.7
Clofentezine	2	1.0	0.13	0.13	0.1
Cyd-X Granulo. Viru	12	2.5	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Dimethoate	2	1.1	0.72	0.79	0.8
Endosulfan	6	2.2	1.44	3.19	8.2
Esfenvalerate	39	1.6	0.04	0.07	1.0
Etoxazole	27	1.1	0.08	0.09	1.0
Fenbutatin-oxide	2	1.0	0.68	0.68	0.6
Fenpropothrin	20	1.4	0.26	0.36	2.9
Fenpyroximate	3	1.0	0.04	0.04	( <sup>3</sup> )
Hexythiazox	2	1.0	0.11	0.11	0.1
Imidacloprid	24	1.6	0.05	0.08	0.8
Lambda-cyhalothrin	5	1.3	0.04	0.05	0.1
Methomyl	12	2.0	0.81	1.64	7.7
Novaluron	34	2.3	0.11	0.26	3.6
Permethrin	10	1.3	0.15	0.20	0.8
Petroleum distillate	11	1.2	18.79	22.64	98.0
Phosmet	57	2.5	1.52	3.82	88.6
Pyridaben	36	1.1	0.24	0.27	3.9
Spinosad	14	1.1	0.11	0.13	0.7
Thiacloprid	31	1.6	0.13	0.22	2.7
Thiamethoxam	3	1.0	0.08	0.08	0.1

See footnote(s) at end of table.

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**Apples: Agricultural chemical applications, 2005<sup>1</sup> (continued)**

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	Pounds per acre	1,000 lbs
<b>Fungicides</b>					
Bacillus subtilis	3	1.2	( <sup>5</sup> )	( <sup>5</sup> )	( <sup>5</sup> )
Basic copper sulfate	4	1.2	1.20	1.41	2.5
Butanone	7	2.5	0.06	0.14	0.4
Calcium polysulfide	1	1.3	10.41	13.88	3.4
Captan	79	4.3	1.84	7.92	254.1
Copper hydroxide	11	1.3	1.29	1.62	7.3
Copper oxychlo. sul.	1	1.0	3.00	3.00	1.1
Copper oxychloride	3	1.0	3.48	3.48	4.3
Copper sulfate	3	1.0	1.10	1.12	1.1
Cyprodinil	8	1.8	0.09	0.16	0.5
Fenarimol	7	2.8	0.05	0.15	0.4
Kresoxim-methyl	23	1.9	0.11	0.21	1.9
Mancozeb	71	4.4	2.75	12.16	348.2
Metiram	21	3.7	2.76	10.11	85.4
Myclobutanil	30	2.3	0.09	0.22	2.7
Oxytetracycline	8	1.7	0.21	0.36	1.2
Pyrimethamil	7	1.3	0.26	0.32	1.0
Streptomycin	29	1.8	0.17	0.29	3.4
Streptomycin sulfate	5	2.1	0.26	0.56	1.0
Sulfur	19	4.1	4.03	16.64	127.5
Thiophanate-methyl	12	2.1	0.28	0.60	2.8
Thiram	10	3.2	2.07	6.53	26.2
Triadimefon	17	1.8	0.14	0.26	1.8
Trifloxystrobin	40	2.0	0.05	0.11	1.7
Ziram	35	2.4	2.70	6.36	89.7
<b>Other chemicals</b>					
Benzyladenine	9	1.1	0.04	0.04	0.1
Butenic acid hydro.	4	1.1	0.05	0.05	0.1
Ethephon	( <sup>2</sup> )	1.0	0.45	0.46	( <sup>3</sup> )
Gibberellins A4A7	2	1.4	0.01	0.02	( <sup>3</sup> )
NAA	20	1.2	0.02	0.02	0.2
Prohexadione calcium	9	1.9	0.12	0.23	0.8
Spirodiclofen	9	1.0	0.24	0.24	0.9

<sup>1</sup> Bearing acres in 2005 for Michigan were 40,500 acres.

<sup>2</sup> Area applied is less than 0.5 percent.

<sup>3</sup> Total applied is less than 50 lbs.

<sup>4</sup> Rate per acre is less than 0.0005 lbs.

<sup>5</sup> Rates and total applied are not available because amounts of active ingredient are not comparable between products.

### Blueberries: Agricultural chemical applications, 2005<sup>1</sup>

Agricultural Chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	Pounds per acre	1,000 lbs
<b>Herbicides</b>					
Diuron	22	1.0	1.32	1.34	4.9
Glyphosate iso. salt	17	1.2	0.53	0.61	1.7
Hexazinone	7	1.1	0.63	0.70	0.8
Norflurazon	12	1.0	1.83	1.84	3.8
Paraquat	4	1.1	0.37	0.42	0.3
Simazine	14	1.0	1.48	1.52	3.5
Terbacil	12	1.0	0.53	0.54	1.1
<b>Insecticides</b>					
Azinphos-methyl	58	1.4	0.58	0.84	8.2
Carbaryl	23	1.4	1.57	2.17	8.4
Esfenvalerate	16	1.2	0.05	0.06	0.2
Imidacloprid	8	1.3	0.11	0.14	0.2
Malathion	33	2.2	1.81	3.93	21.6
Methomyl	23	1.3	0.64	0.84	3.3
Phosmet	71	2.1	0.87	1.85	22.0
Tebufenozide	34	1.2	0.23	0.27	1.6
<b>Fungicides</b>					
Azoxystrobin	4	1.2	0.18	0.22	0.1
Boscalid	16	1.3	0.02	0.02	0.1
Calcium polysulfide	5	1.2	4.29	5.07	4.6
Captan	43	2.4	2.14	5.22	37.8
Chlorothalonil	15	1.4	2.22	3.10	7.9
Fenbuconazole	60	2.0	0.09	0.19	1.9
Fosetyl-al	5	1.7	3.92	6.76	6.0
Pyraclostrobin	33	1.8	0.11	0.19	1.1
Thiophanate-methyl	47	1.6	0.70	1.15	9.2
Ziram	40	1.9	2.70	5.10	34.4

<sup>1</sup> Bearing acres in 2005 for Michigan were 16,800 acres.

**Cherries, sweet: Agricultural chemical applications, 2005<sup>1</sup>**

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	Pounds per acre	1,000 lbs
Herbicides					
2,4-D, dimeth. salt	10	1.3	0.88	1.14	0.9
Glyphosate iso. salt	31	1.1	0.73	0.78	2.0
Paraquat	10	1.1	0.45	0.51	0.4
Simazine	10	1.0	1.07	1.08	0.9
Insecticides					
Azinphos-methyl	68	1.8	0.52	0.91	5.1
Carbaryl	39	1.3	2.27	3.03	9.6
Endosulfan	2	1.7	0.76	1.26	0.2
Imidacloprid	5	1.4	0.07	0.09	( <sup>2</sup> )
Permethrin	27	1.9	0.10	0.19	0.4
Thiamethoxam	19	1.3	0.05	0.07	0.1
Fungicides					
Basic copper sulfate	5	1.0	0.54	0.54	0.2
Boscalid	19	1.5	0.01	0.02	( <sup>2</sup> )
Calcium polysulfide	9	1.7	4.60	7.84	5.8
Captan	20	1.5	1.73	2.60	4.3
Chlorothalonil	71	2.2	2.11	4.68	27.3
Copper hydroxide	6	1.3	1.96	2.56	1.2
Copper oxychloride	5	1.0	1.91	1.91	0.8
Fenbuconazole	48	2.4	0.08	0.20	0.8
Ferbam	5	2.0	1.84	3.61	1.4
Myclobutanil	4	1.3	0.11	0.15	0.1
Phosphorous acid	2	1.1	0.59	0.67	0.1
Propiconazole	20	1.5	0.10	0.15	0.3
Pyraclostrobin	19	1.5	0.00	0.00	( <sup>2</sup> )
Sulfur	69	3.9	4.84	18.82	106.3
Tebuconazole	47	2.1	0.17	0.37	1.4
Thiophanate-methyl	7	1.3	0.97	1.30	0.8
Ziram	38	1.9	2.32	4.48	13.9
Other chemicals					
Spirodiclofen	3	1.0	0.26	0.26	0.1

<sup>1</sup> Bearing acres in 2005 for Michigan were 8,200 acres.

<sup>2</sup> Total applied is less than 50 lbs.

**Cherries, tart: Agricultural chemical applications, 2005<sup>1</sup>**

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	Pounds per acre	1,000 lbs
<b>Herbicides</b>					
2,4-D, dimeth. salt	11	1.1	0.78	0.86	2.6
Diuron	1	1.1	1.23	1.36	0.5
Glyphosate iso. salt	36	1.1	0.73	0.81	8.0
Paraquat	12	1.1	0.38	0.41	1.3
Simazine	18	1.0	1.28	1.30	6.3
<b>Insecticides</b>					
Azinphos-methyl	61	2.0	0.49	0.98	16.3
Carbaryl	3	1.3	2.30	2.92	2.5
Chlorpyrifos	18	1.2	0.56	0.69	3.4
Clofentezine	4	1.0	0.08	0.08	0.1
Esfenvalerate	20	1.6	0.04	0.06	0.3
Imidacloprid	4	1.0	0.10	0.10	0.1
Lambda-cyhalothrin	14	1.7	0.03	0.05	0.2
Permethrin	11	2.0	0.09	0.18	0.5
Phosmet	57	1.6	1.06	1.73	27.2
Thiamethoxam	3	1.1	0.05	0.06	( <sup>2</sup> )
<b>Fungicides</b>					
Boscalid	33	1.8	0.01	0.01	0.1
Calcium polysulfide	2	2.2	10.17	22.86	15.0
Captan	21	1.8	1.59	2.90	16.9
Chlorothalonil	76	3.0	1.70	5.15	107.5
Copper hydroxide	8	1.8	1.26	2.25	5.0
Copper sulfate	2	1.0	1.21	1.21	0.5
Dodine	11	1.7	0.67	1.10	3.3
Fenbuconazole	26	1.9	0.08	0.15	1.1
Myclobutanil	6	1.7	0.10	0.16	0.3
Propiconazole	4	1.4	0.10	0.13	0.2
Pyraclostrobin	33	1.8	( <sup>3</sup> )	0.00	( <sup>2</sup> )
Sulfur	68	4.2	2.87	11.93	221.1
Tebuconazole	58	2.0	0.13	0.25	4.0
Thiophanate-methyl	2	1.6	0.60	0.98	0.7
Trifloxystrobin	18	1.4	0.05	0.07	0.3
Ziram	3	1.9	2.39	4.65	3.9
<b>Other chemicals</b>					
Ethephon	74	1.1	0.17	0.19	3.8
Gibberellic acid	32	1.4	0.01	0.02	0.1
Spirodiclofen	2	1.0	0.19	0.19	0.1

<sup>1</sup> Bearing acres in 2005 for Michigan were 27,300 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Rate per acre is less than 0.0005 lbs.

**Peaches: Agricultural chemical applications, 2005<sup>1</sup>**

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	Pounds per acre	1,000 lbs
Herbicides					
2,4-D, dimeth. salt	7	1.1	0.85	0.91	0.3
Glyphosate iso. salt	18	1.2	0.75	0.89	0.8
Paraquat	22	1.0	0.53	0.55	0.6
Terbacil	8	1.0	0.65	0.66	0.3
Insecticides					
Azinphos-methyl	32	2.5	0.62	1.53	2.5
Carbaryl	26	1.7	2.02	3.44	4.5
Chlorpyrifos	7	1.8	1.44	2.53	0.9
Endosulfan	18	2.1	0.80	1.69	1.5
Esfenvalerate	54	3.0	0.04	0.11	0.3
Imidacloprid	10	1.5	0.05	0.08	( <sup>2</sup> )
Lambda-cyhalothrin	28	2.3	0.03	0.07	0.1
Methomyl	14	1.4	0.63	0.87	0.6
Permethrin	14	2.2	0.14	0.31	0.2
Phosmet	24	2.3	1.33	3.02	3.6
Thiamethoxam	6	1.0	0.05	0.05	( <sup>2</sup> )
Fungicides					
Basic copper sulfate	12	1.0	0.65	0.65	0.4
Boscalid	15	1.7	0.01	0.01	( <sup>2</sup> )
Copper hydroxide	19	1.1	1.75	1.85	1.7
Copper oxychlo. sul.	4	1.0	2.54	2.54	0.5
Copper oxychloride	12	1.0	2.33	2.36	1.5
Dodine	19	2.7	0.41	1.12	1.0
Fenbuconazole	55	2.6	0.09	0.23	0.6
Oxytetracycline	24	2.8	0.15	0.41	0.5
Propiconazole	24	2.1	0.10	0.21	0.2
Sulfur	67	3.8	5.43	20.54	68.6
Tebuconazole	23	2.2	0.14	0.30	0.3
Thiophanate-methyl	3	1.7	0.57	0.94	0.2
Ziram	7	1.5	3.32	5.11	1.8
Other chemicals					
E-8 Dodecetyl acetate	15	1.0	0.00	0.00	( <sup>2</sup> )
Z-8 Dodecanol	15	1.0	0.00	0.00	( <sup>2</sup> )
Z-8 Dodecen acetate	15	1.0	0.05	0.05	( <sup>2</sup> )

<sup>1</sup> Bearing acres in 2005 for Michigan were 5,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

### Fertilizer applications: Corn, 2005<sup>1</sup>

Fertilizer	Symbol	Area applied	Applications	Rate per application	Rate per crop year	Total applied
		Percent	Number	Pounds per acre	Pounds per acre	Million pounds
Nitrogen	N	97	2.3	55	128	277.8
Phosphate	P <sub>2</sub> O <sub>5</sub>	88	1.2	39	45	89.6
Potash	K <sub>2</sub> O	81	1.2	69	82	148.4

<sup>1</sup> Planted acres in 2005 were 2.25 million acres.

### Fertilizer applications: Oats, 2005<sup>1</sup>

Fertilizer	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	Pounds per acre	Million pounds
Nitrogen	82	1.1	32	35	2.6
Phosphate	72	1.0	43	44	2.8
Potash	77	1.0	49	49	3.4

<sup>1</sup> Planted acres in 2005 were 90,000 acres.

### Fertilizer applications: Fall potatoes, 2005<sup>1</sup>

Fertilizer	Symbol	Area applied	Applications	Rate per application	Rate per crop year	Total applied
		Percent	Number	Pounds per acre	Pounds per acre	Million pounds
Nitrogen	N	100	6.4	41	264	17.9
Phosphate	P <sub>2</sub> O <sub>5</sub>	99	2.1	64	135	9.1
Potash	K <sub>2</sub> O	99	4.0	76	303	20.5

<sup>1</sup> Planted acres in 2005 were 68,000 acres.

### Agricultural chemical applications: Corn, 2005<sup>1</sup>

Agricultural chemical	Area applied	Applications	Rate per application	Rate per crop year	Total applied
	Percent	Number	Pounds per acre	Pounds per acre	1,000 pounds
Herbicides:					
2,4-D, 2-EHE	2	1.3	0.43	0.55	26
2, 4-D, dimeth. Salt	1	1.0	0.34	0.34	7
Acetochlor	28	1.0	1.83	1.83	1,148
Atrazine	71	1.1	1.12	1.23	1,952
Clopyralid	8	1.0	0.11	0.11	21
Dicamba	2	1.0	0.14	0.14	5
Dicamba, Digly Salt	7	1.0	0.23	0.23	38
Dicamba, Sodium Salt	3	1.0	0.13	0.13	10
Diflufenopyr-sodium	3	1.0	0.05	0.05	4
Dimethenamid-P	7	1.0	0.75	0.75	116
Flumetsulam	13	1.0	0.04	0.04	11
Glyphosate iso. Salt	33	1.1	0.84	0.94	699
Mesotrione	11	1.0	0.16	0.16	38
Metolachlor	1	1.0	1.16	1.16	28
Nicosulfuron	12	1.0	0.02	0.02	5
Pendimethalin	8	1.0	0.93	0.93	164
Primsulfuron	2	1.0	0.02	0.02	1
Rimsulfuron	8	1.0	0.01	0.01	2
S-Metolachlor	23	1.0	1.32	1.32	676
Simazine	1	1.0	1.18	1.18	39
Insecticides					
Bifenthrin	5	1.0	0.04	0.04	5
Chlorpyrifos	4	1.0	0.93	0.93	90

<sup>1</sup> Planted acres in 2005 were 2.25 million acres.

### Agricultural chemical applications: Oats, 2005<sup>1</sup>

Agricultural chemical	Area applied Percent	Applications Number	Rate per application Pounds per acre	Rate per crop year Pounds per acre	Total applied 1,000 pounds
Herbicides					
2, 4-D, dieth salt	7	1	0.55	0.55	3
2, 4-D, dimeth. Salt	36	1	0.46	0.46	15
MCPA, dimeth salt	5	1	0.36	0.36	2

<sup>1</sup> Planted acres in 2005 were 90,000 acres.

### Agricultural chemical applications: Fall potatoes 2005<sup>1</sup>

Agricultural chemical	Area applied Percent	Applications Number	Rate per application Pounds per acre	Rate per crop year Pounds per acre	Total applied 1,000 pounds
Herbicides					
Linuron	60	1.0	0.69	0.69	18
Metribuzin	55	1.1	0.30	0.30	8
Rimsulfuron	24	1.0	0.02	0.02	( <sup>2</sup> )
S-Metolachlor	75	1.0	1.10	1.10	36
Insecticides					
Carbaryl	( <sup>3</sup> )	2.3	0.74	1.73	( <sup>2</sup> )
Cyfluthrin	43	3.5	0.03	0.10	2
Endosulfan	4	1.2	0.62	0.75	1
Esfenvalerate	15	1.4	0.03	0.04	( <sup>2</sup> )
Imidacloprid	56	1.3	0.11	0.14	3
Permethrin	9	3.5	0.09	0.31	1
Phosmet	( <sup>3</sup> )	2.0	0.72	1.46	( <sup>2</sup> )
Thiamethoxam	23	1.0	0.10	0.10	1
Fungicides					
Azoxystrobin	53	2.0	0.11	0.22	5
Chlorothalonil	70	7.5	0.93	6.98	215
Copper hydroxide	6	2.8	0.70	2.00	5
Manocozeb	66	4.5	1.19	5.42	157
Triphenyltin hydrox.	22	1.8	0.11	0.20	2
Other chemicals					
Diquat dibromide	58	1.5	0.31	0.47	12

<sup>1</sup> Planted acres in 2005 were 68,000 acres.

<sup>2</sup> Total applied is less than 50 lbs.

<sup>3</sup> Area applied is less than 0.5 percent

### Agricultural chemicals: Common and trade names by class

#### Herbicides

Common name	Trade name	Common name	Trade name
2, 4-D 2-EHE	WECO MAX, Weedone LV4 Solventless	Linuron	Layby Pro, Linex 4L, Linex 50 DF, Lorox DF
2,4-D dieth sal	Hi-Dep, Weedar 64A	MCPA dimethyl. Salt	Rhomene MCPA Amine, MCP Amine 4
2, 4-D, dimeth. salt	several names	Mesotrione	Callisto, Camix, Lexar Herbicide, Lumax
Acetochlor	Keystone	Metolachlor	Bicep 6L, Bicep II, Dual 8E, Me-Too-Lachlor, Parallel, Stalwart C
Atrazine	several names	Metribuzin	several names
Clopyralid	Stinger 3EC	Nicosulfuron	several names
Dicamba	several names	Norflurazon	Predict, Solicam DF, Zorial Rapid 80
Dicamba Digly Salt	Clarity	Oryzalin	Oryza AG, Oryzalin 4 A.S., Surflan 75WP, Surflan A
Dicamba Sodium Salt	Celebrity Plus, Dicamba SG, Distinct, Yukon Herbicide	Paraquat	several names
Diflufenozopyr-sodium	Celebrity Plus, Distinct	Pendimethalin	several names
Dimethenamid-P	G-Max Lite, Guardsman Max, Outlook	Primsulfuron	NorthStart, Spirit
Diuron	several names	Rimsulfuron	Basis
Flumetsulam	Accent Gold, Hornet WDG, Python WDG, Scorpion III	S-Metolachlor	Dual II Magnum, Dual Magnum
Glyphosate iso.salt	several names	Simazine	several names
Hexazinone	Velpar 90SP, Velpar L 2EC	Terbacil	Sinbar 80WP

#### Insecticides

Abamectin	several names	Fenpropathrin	Danitol 2.4 EC Spray
Acetamiprid	Assail 70WP, Intruder WSP	Fenpyroximate	FujiMite
Azinphos-methyl	several names	Hexythiazox	Hexagon DF, Onager, Savey 2E (aka Onager), Savey 50 DF, Savey 50 WP
Benzoic acid	Intrepid 2F, Intrepid 80 WSP	Imidacloprid	several names
Bifenthrin	several names	Lambda-cyhalothrin	Silencer (aka Lambda-CY 1EC), Warrior
Bt subsp. kurstaki	several names	Malathion	several names
Carbaryl	several names	Methomyl	Lannate L (1.8 lbs.) Canceled 1998
Chlorpyrifos	several names	Novaluron	Rimon 0.83EC
Clofentezine	Apollo 42%, Apollo SC	Permethrin	several names
Cyd-X Granulo. Virus	CYD-X, Carpovirusine, Virossoft	Petroleum distillate	several names
Cyfluthrin	Bioninsecticide Baythroid 2EC, Renounce 20WP, Tempo SC Ultra	Phosmet	Imidan 12.5%, Imidan 50-WSB, Imidan 70 WSB WP
Dimethoate	several names	Pyridaben	Nexter, Pyramite, Sanmite 75 WP
Endosulfan	several names	Spinosad	several names
Esfenvalerate	Asana, Asana XL	Tebufenozide	Confirm 2F
Etoxazole	TetraSan 5 WDG, Zeal (aka Secure)	Thiacloprid	Calypso
Fenbutatin-oxide	Vendex 4L, Vendex 50WP	Thiamethoxam	Actara, Centric, Platinum

**Agricultural chemicals: Common and trade names by class**

Fungicides			
Common name	Trade name	Common name	Trade name
Azoxystrobin	Amistar, Quadris	Mancozeb	several names
Bacillus subtilis	Serenade Biofungicide WP, Serenade MAX, Serenade WP Biofungicide several names	Metiram	Polyram 80 DF, Polyram 80WP
Basic copper sulfate		Myclobutanil	Laredo EC, Nova 40W, RH-144228, Rally 40W
Boscalid	Endura 70WG, Pristine	Oxytetracycline	Mycoshield, Mycoshield WP
Butanone	Triadimefon 50% DF	Phosphorous acid	several names
Calcium polysulfide	several names	Propiconazole	Bumper 41.8 EC, Orbit 3.6EC, Orbit 45 WP, PropiMax EC, Tilt
Captan	several names	Pyraclostrobin	Cabrio EG, Headline, Pristine
Chlorothalonil	several names	Pyrimethanil	SCALA SC
Copper hydroxide	several names	Streptomycin	Agri-Mycin 17, Agri-Strep 17WP, Agri-Strep 500 50WP, Streptomycin 3000 Dust
Copper oxychlo. sul.	several names	Streptomycin sulfate	Firewall 17 WP, Flame Out, Streptomycin sulfate
Copper oxychloride	C O C WP, C-O-C-S WDG, CSC Copper Sulfur Dust	Sulfur	several names
Copper sulfate	Basicop, Copper Sulfate, Copper Sulfate Powdered Bluestone	Tebuconazole	Elite 45 DF
Cyprodinil	Switch 62.5WG, Vangard WG	Thiophanate-methyl	several names
Dodine	Cyprex 65-W, Dodine 65W, Syllit 65W, Syllit FL	Thiram	Thiram 65WP, Thiram 75WP
Fenarimol	Rubigan A.S., Rubigan EC	Triadimefon	several names
Fenbuconazole	Enable 2F, Indar 75 WSP	Trifloxystrobin	Flint, Gem
Ferbam	Carbamate 76WDG, Ferbam Granuflo	Triphenyltin hydrox.	Agri Tin, Super Tin 80WP, Super Tin 4L
Fosetyl-al	Aliette 80WP, Aliette WDG	Ziram	Ziram 76 DF, Ziram 87.3 WP, Ziram F-4, Ziram Granuflo
Kresoxim-methyl	Sovran		
Other			
Benzyladenine	several names	Gibberellins A4A7	several names
Butenoic Acid Hydro.	ReTain	NAA	several names
Diquat dibromide	Diquat, Reglone, Roundup Weed & Grass Killer Concentrate	Prohexadione calcium	Apogee PGR
E-8-Dodecenyl acetat	several names	Spirodiclofen	Envendor 2 SC
Ethephon	Ethephon 2, Ethephon 6, Ethrel Plant Regulator 2EC	Z-8-Dodecanol	several names
Gibberellic acid	several names	Z-8-Dodecen acetate	several names